

Nomenclature: Oligodeoxynucleotides are named x-y-z where:
 x= restriction site (first letter only)
 y= function (displacer, linker or target)
 z= composition (BrdC, MedC, dC) or polarity (displacer or linker side)
 E(N) = error at position N (a mismatch) if present

[illegible]

PMS-ES
PMS-SE

Nomenclature: Oligodeoxynucleotides are named x-y where:
 x= function (PMS)
 y= orientation in product (e.g. ES is *EcoRI* to *SfiI*)

C AAGCTT GCATGC CTGCAG GTGAC TCAATGATTCCC B0-D-MedC (1) -1
G AGTTACTAAGGG BT-L-dC-1

Nomenclature: Oligodeoxynucleotides are named x-y-z where x = BT if both branch migration and triplex formation are possible, x = B0 if only branch migration is possible; y = composition (dC, MedC or BrdC) in the branch migration region (1) and/or triplex forming region (2); z = laboratory index.



TABLE II: Bromodeoxycytidine and Methyldeoxycytidine Thermodynamics

	t_m in 1 M Na ⁺ , C = 6 μ M		
Oligodeoxynucleotides	pH 4	pH 7	pH 10
14-dC-A + 14-dC-S		57°	
14-dC-A + 14-BrdC-S		63°	
14-dC-S + 14-BrdC-A		62.5°	
14-BrdC-A + 14-BrdC-S		65°	
12-dC-A + 12-dC-S	60°	53.5°	50°
12-dC-A + 12-BrdC-S	70°	69.5°	54°
	pH 4.7	pH 7	pH 9.6
14-dC-A + 14-dC-S		57°	
14-dC-A + 14-MedC-S		60°	
14-dC-S + 14-MedC-A		59.5°	
14-MedC-A + 14-MedC-S		64.5°	
12-dC-A + 12-dC-S	50°	60°	47.5°
12-dC-A + 12-MedC-S	55°	67°	50.5°

[illegible]



TABLE III: Temperature Dependence of Displacement Rates with BrdC-Containing Displacers

A. Blunt ends

Oligodeoxynucleotides	Temp (°C)	Half-time (min) for displacement with 12-BrdC-S at:		
		101 μ M	20 μ M	4 μ M
12-dC-S* (C = 0.25 μ M) +	37	2	4-8	16-32
12-dC-A (C = 0.75 μ M)	32	4-8	8-16	32
	27	4-8	32-64	128-256

B. Overhangs

Oligodeoxynucleotides	(°C)	Half-time (min) for displacement with 16-BrdC-S at:	
		3 μ M	0.57 μ M
12-dC-S* (C = 0.25 μ M) +	37	<1	4-8
16-dC-A (C = 0.57 μ M)	32	<1	16-32
	27	<1	2-4
* 5'- ³² P-labeled	22	<1	<1

C. Effect of Linkers

Site	Overhang	G+C%	Half time for displacement (minutes)	
			No linker	Linker
<i>Eco</i> RI	5'	0	60	6
<i>Pst</i> I	3'	50	8	< 1
<i>Xma</i> I	5'	100	8-16	< 1

CONDITIONS: Ligase buffer (pH = 7); 37°C; 10 μ L per reaction.
Target: Kinased strand 10 ng, Unlabeled strand 30 ng.
Displacer: 150 ng; Linker (if present): large molar excess.
Displacer concentration = 1 μ M.

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* by definition

Displacer	Relative yield (Fragment B/Fragment A)	
	Experimental	Calculated
P-D-BrdC	24	29
P-D-BrdC-E(10)	1	1
P-D-BrdC-E(24)	24	39

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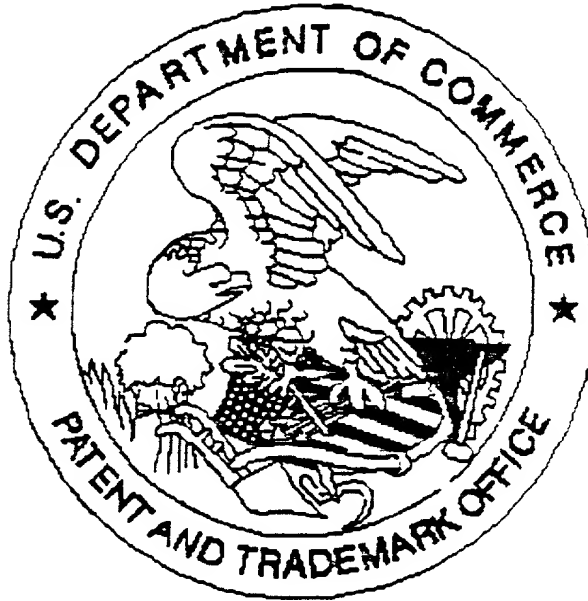
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